Once leaven has been mixed into the dough, is it visible to human eye or does the dough appear the same without it?

In a normal bread or sourdough dough, leaven is not visibly distinguishable once mixed in; the dough just looks like dough. The difference shows up over time as the dough rises and its texture and volume change.

Immediately after mixing

Right after mixing, dough with yeast or sourdough looks essentially the same as dough without any leaven: a uniform, pasty or elastic mass.
There are no visible “bits of leaven” because the yeast cells or starter are dispersed microscopically throughout the hydrated flour.

As fermentation proceeds

As the leaven ferments the dough, visual differences appear, but they are at the level of the dough as a whole, not the leaven itself.
Leavened dough gradually becomes puffed, lighter, and more airy, often with a smoother, slightly domed surface and tiny gas bubbles or blisters, whereas unleavened dough stays denser, flatter, and more compact in appearance.

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1. https://www.reddit.com/r/AskCulinary/comments/1zh3h5/why_does_my_bread_dough_appearance_change_when_i/
2. https://www.facebook.com/groups/homesteadingforbeginners/posts/2192452607618778/
3. https://www.tiktok.com/@dantheebaker/video/7092120282177162542
4. https://www.instagram.com/reel/C3-Q2kPrzs7/
5. https://www.thefreshloaf.com/lessons/myfirstsourdough
6. https://www.instagram.com/reel/DEfn1CQR17R/?hl=en
7. https://niksharma.substack.com/p/baking-101-leavening-agents-explained
8. https://www.youtube.com/watch?v=RaR-2km0OcQ
9. https://www.facebook.com/thesourdoughjourney/videos/here-is-an-example-of-what-my-leaven-or-levain-looks-like-before-i-mix-it-in-my-/818406497460273/